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**From:** LEE, LILY [LEE.LILY@EPA.GOV]  
**Sent:** 5/20/2016 8:01:29 PM  
**To:** Terry, Robert [Terry.Robert@epa.gov]  
**CC:** Guria, Peter [Guria.Peter@epa.gov]; Chesnutt, John [Chesnutt.John@epa.gov]  
**Subject:** Hunters Point radiation technical assistance - 3 areas of help needed

Dear Rob,

Thank you for talking with me yesterday about three ways that you can help Hunters Point.

First, about the search for EPA's old records, thank you for explaining to me yesterday that the movers took away the box with some of the hard copy documents and that you were having trouble downloading from the CD the emails from Steve Dean, previous health physicist. Also, thank you for letting me know you had already emailed me a report from your review of the electronic documents. I can't find that. Could you please resend it? Thanks!

As a second priority, thank you for your recommendations regarding calculation of risks related to Tetra Tech. I have drafted this language for a request to the Navy to do this:

Calculate estimates of the risk to nearby residents and workers (past, current, and future for both) of a scenario in which the Navy missed falsified samples and contamination is left in place above EPA's acceptable risk range. For example, as part of Tetra Tech's earlier internal investigation, after resampling in 386 locations, it did 3 more removals after discovering levels higher than originally presented. Make realistic assumptions about actual concentrations and actual exposure pathways (e.g., durable cover, restrictions against growing food, etc.). Present the breakdown of risk by pathway (e.g. inhalation, ingestion, etc.).

In the mean time, because we don't know how long the Navy might take, and because it is valuable to have EPA's own independent evaluation, I appreciate your agreement to do this using the current version of the EPA PRG calculator. I left on your desk yesterday the hard copy of the Tetra Tech internal investigation so that you could look up the concentrations that were associated with the 3 additional removals that Tetra Tech conducted as part of corrective actions. I think you said that the concentrations were what you needed from me, and then you could quickly run the scenarios. When do you think you can do these risk estimates?

The third task that we talked about yesterday was a memo to the file or to our managers that formally compiles the calculations that you did on April 21 of the risks for each RACR associated with the survey units with the highest RES-RAD-estimated risks. Those are currently in the form of individual emails that you sent to me throughout the day. It would be valuable to have those put together into a single Word file with an explanation of the method and assumptions that you made in your calculations. I can write the introduction, but I would need from you the technical explanation of the work you did and the tables. When do you think that you could compile your analysis?

I know that we've increased the amount of support that Hunters Point has been asking for lately. Maybe we can sit down again some time next week and check in on your workload and timing.

Thanks!

- Lily

Lily Lee  
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**From:** Terry, Robert  
**Sent:** Friday, May 13, 2016 11:03 AM  
**To:** LEE, LILY <[LEE.LILY@EPA.GOV](mailto:LEE.LILY@EPA.GOV)>  
**Cc:** Guria, Peter <[Guria.Peter@epa.gov](mailto:Guria.Peter@epa.gov)>  
**Subject:** RE: Do any of these attached contain documentation re original release criteria or of Ra-226 or Th-232 background levels?

I just learned that I will be in the office for the next two weeks after all, though working with minimum resources. In any case, I should be available, and as I told you in the email below I'll be working on release criteria, background concentrations, and past Th-232 measurements.

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**From:** Terry, Robert  
**Sent:** Friday, May 13, 2016 9:49 AM  
**To:** LEE, LILY <[LEE.LILY@EPA.GOV](mailto:LEE.LILY@EPA.GOV)>  
**Subject:** RE: Do any of these attached contain documentation re original release criteria or of Ra-226 or Th-232 background levels?

Thanks for the CD with Steve Dean's correspondence. Following is a response to an earlier inquiry that you had sent, based on some of Steve's documents that you had attached to an email.

I thought I had also sent you an email regarding another of the documents that you had attached to that same email, describing a document I had found that was dated in 2002, in which it did not appear that either Region 9 or the Navy had come to any specific conclusions about a cleanup goal for Ra-226. Unfortunately, I can't find that email.

During the next two weeks, our group will be working at home, though I do plan to be in the office for an hour or so on Wednesday morning, May 18<sup>th</sup>. I will dedicate the next two weeks almost entirely to reviewing the CD and other documents that you recently sent to me. I will probably email you more than once during the next two weeks, to keep you up to date and see if we need to modify or clarify your information requests. If you need a final transmittal from me of my findings before June 1<sup>st</sup> please let me know.

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**From:** Terry, Robert  
**Sent:** Monday, May 02, 2016 2:22 PM  
**To:** LEE, LILY <[LEE.LILY@EPA.GOV](mailto:LEE.LILY@EPA.GOV)>  
**Subject:** RE: Do any of these attached contain documentation re original release criteria or of Ra-226 or Th-232 background levels?

The release criteria in Table 6-1 of the Basewide Radiological Work Plan dated February 16, 2005, does state that the concentration limit for <sup>226</sup>Ra in soil (both Outdoor Worker and Residentail scenarios) ". . . is 1 pCi/g above background; not to exceed 2 pCi/g total, per agreement with EPA." So there might be some document dated prior to February 16, 2005, where EPA and the Navy agreed on a cleanup goal of 1 pCi/g above background.

The document also illustrates that the Navy did not yet clearly understand that the 25 mrem/yr NRC decommissioning rule does not apply to Superfund site cleanups, even though Steve Dean had already made that clear in earlier correspondence.

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**From:** LEE, LILY  
**Sent:** Wednesday, April 27, 2016 8:57 AM  
**To:** Terry, Robert <[Terry.Robert@epa.gov](mailto:Terry.Robert@epa.gov)>  
**Cc:** Chesnutt, John <[Chesnutt.John@epa.gov](mailto:Chesnutt.John@epa.gov)>

**Subject:** Do any of these attached contain documentation re original release criteria or of Ra-226 or Th-232 background levels?

Dear Rob,

Dan Hirsch asked the following:

1. Documentation re original release criteria & calculations using the then-current version of EPA PRG Calculator, including what risk level that represents
2. "The Hunters Point documents we have been reviewing indicate a remediation level for radium-226 of 1 pCi/g above background, not to exceed 2 pCi/g, "per agreement with EPA." Could you send me documentation of that EPA agreement and its basis, and any risk assessment that was performed at the time of the risk associated with that level of radium? Also, I am having trouble locating the value being employed for radium background—could you let me know what value is being used and where I can find the source for it?"

We are interested in Thorium background levels.

Mark Ripperda thought these documents might contain information relevant to these questions. Could you please review these documents to see if they have information that addresses these questions? I'd appreciate it!

- Lily

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**From:** ELATTAR, SARA  
**Sent:** Thursday, April 21, 2016 8:42 AM  
**To:** LEE, LILY <[LEE.LILY@EPA.GOV](mailto:LEE.LILY@EPA.GOV)>  
**Cc:** HSG Circulation <[circulation@herndon-group.com](mailto:circulation@herndon-group.com)>  
**Subject:** RE: Could I get these documents?

Good morning Lily,

No problem at all, I am glad to help out.

I have created DRF (Document Request form) on your behalf. Please see below:

	Requester	Doc Request #	Site Name	Submitted	Due Date	Status	Released?	Request Type
Notes Link	LEE, L.	90421-0820	TREASURE ISLAND NAVAL STN HUNTERS PT AN	04/21/2016	04/27/2016	In Process	No	(Not Entered)

As for the requested documents, 9 documents were found in PDF formate in SEMS. I will attach them within this email. Please see attachment.

The rest of the documents (2054332, 88184149, 2099768, 156344, 2054389, 2054392, 2089669, and 2089668) are located at the FRC and I have requested for their retrieval. Please note it can take from 3 to 4 days to arrive to the Records center,

You will be notified immediately of their arrival.

Please feel free to request as many documents as necessary! ☺

Let me know if you need additional assistance.

Best,

Sara Elattar  
Document Specialist  
U.S. EPA R9 Regional Records Center  
(415) 947-8717  
Managed by Herndon Solutions Group

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**From:** LEE, LILY  
**Sent:** Wednesday, April 20, 2016 9:35 PM  
**To:** ELATTAR, SARA <Elattar.Sara@epa.gov>  
**Subject:** Could I get these documents?

Dear Sara

I'm so sorry to ask for so many this time. Could I please get these? I appreciate it!

- Lily

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**From:** Ripperda, Mark  
**Sent:** Wednesday, April 20, 2016 11:38 AM  
**To:** LEE, LILY <LEE.LILY@EPA.GOV>  
**Subject:** RE: Got 2 of these 2153266, 2229254, and 2232762

The missing cleanup goal information is between the 2001 Action Memo which sets a cleanup goal of 5pCi/g above background and the 2006 Action Memo which sets 1 pCi/g above background, per communication with EPA. So here's a list of what I see that might contain it (I'm guessing that the last three in the list have the best chance of documenting the agreement):

2054332	4/12/2001	Memo: Comments on radiological investigation & confirmation surveys conducted on 3/19/01, w/attchs (radiation)	Steve Dean / Environmental Protection Agency - Region 9
88184149	4/12/2001	Memo: Bldg 364 radiological contamination removal actions (radiation)	Steve Dean / Environmental Protection Agency - Region 9
2099768	6/6/2002	Ltr: Comments on Historical radiological assessment, v2 - use of general radioactive materials, 1939-2002 (3/29/02), w/TL to K Forman fr C Trombadore 6/6/02	Environmental Protection Agency - Region 9
156344	3/28/2003	Radiological scanner van survey (9/9/02-9/12/02), w/TL (radiation)	Environmental Protection Agency - Radiation & Indoor Environments National Laboratory
2126455	5/19/2003	EPA responses to comments on draft historical radiological assessment, v 2, w/TL fr C Trombadore to K Forman	Environmental Protection Agency - Region 9
2226304	4/27/2004	Ltr: Transmits comments fr EPA & EPA contractor on draft final historical radiological assessment, v2, dated 2/04, w/attchs	Michael Work / Environmental Protection Agency - Region 9
2227348	11/16/2004	Comments on final historical radiological assessment & comments on response to comments on draft final historical radiological assessment, history of use of general radioactive materials (1939-2003) w/TL fr M Work to K Forman	Environmental Protection Agency - Region 9
2216003	2/16/2005	Basewide radiological workplan, w/apps A-B & w/o fig 2-1	Tetra Tech F W, Inc   M K M Engineers, Inc   New World Environmental, Inc

2054389	2/18/2005	Workplan, removal action design & implementation, metal debris reef & metal slag areas, parcels E & E-2, draft, w/TLs, instruction sheet, & replacement pages (radiation)	Tetra Tech F W, Inc	
2140350	2/22/2005	Mtg Agenda & Notes: BRAC Cleanup Team (BCT) mtg, w/attchs	Tetra Tech, Inc	
2054392	2/25/2005	Project workplan, PCB hot spot soil excavation site, parcels E & E-2, draft, w/TL fr K Forman to M Work (radiation)	Tetra Tech F W, Inc	
2232765	3/7/2005	Email: Questions about basewide radiological workplan, w/history	Michael Work / Environmental Protection Agency - Region 9	Steve Dean / Environmental Protection Agency - Region 9
2232718	4/6/2005	Mtg Handout: Radiological program overview mtg (4/6/05), w/marginalia	US Navy - Base Realignment & Closure Program Management Office	
2226257	4/13/2005	Ltr: Concerns re project workplan, radiological time-critical removal action, IR-02 northwest & central, parcel E, dated 3/9/05, w/TL fr I Balkissoon to J Ricks	James Ricks / Environmental Protection Agency - Region 9	
2232748	4/14/2005	Ltr: Comments on draft removal action design & implementation workplan, metal debris reef & metal slag areas, parcels E & E-2, dated 2/05, w/TL fr J Ricks to P Brooks	Environmental Protection Agency - Region 9	
2089669	2/14/2006	Draft final project workplan, base-wide storm drain & sanitary sewer removal, w/TL to J Ricks fr K Forman 2/13/06	Tetra Tech E C, Inc	
2089668	2/14/2006	Draft final parcel B design plan, storm drain & sanitary sewer removal, w/TL to J Ricks fr K Forman 2/13/06	Tetra Tech E C, Inc	